



JOY ORGANICS

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Joy Organics Green Apple Gummies - Kosher Certified
PRODUCT STRENGTH: 10 mg / each
HEMP LOT NUMBER: C0325-003
BEST BY DATE: 03/04/2022
GUMMY LOT NUMBER: J10GA01

Physical Attributes

Test	Method	Specification	Results
Color	SOP-100	Medium Lime Green	PASS
Odor	SOP-100	Sweet, apple, sour	PASS
Appearance	SOP-100	Medium green gummies with sugar coating in child proof container	PASS
Primary Package Eval.	SOP-132	Container clean and free of filth. Container caps tight and shrink bands intact	PASS
Secondary Package Eval.	SOP-132	Labeling Compliance Checked, Cartons sturdy and clean. Sufficient cushion material exists. Box taped and secure.	PASS

Review of Third-Party Analysis

Panel	Method	Specification	Results	Pass/Fail
Potency - Total CBD	SOP-111	9.5-12.5 mg CBD / ea. LOQ*: 10 PPM† (0.001%)	<u>10.3 mg</u>	PASS
Potency - D9-THC	SOP-111	None Detected LOQ: 10 PPM (0.001%)	<u>ND</u>	PASS
FL Compliant Pesticide Panel	SOP-111	Florida State Hemp Program Rule 5B-57.014: Action Limits for Pesticides	<u>ND</u>	PASS
Microbial - Stec E.Coli	SOP-111	Complies with USP 61/62	<u>Below LOQ</u>	PASS
Microbial - Salmonella	SOP-111	Complies with USP 61/62	<u>Below LOQ</u>	PASS
Microbial - Aspergillus	SOP-111	Complies with USP 61/62	<u>Below LOQ</u>	PASS
CA Compliant Heavy Metal Panel	SOP-111	Arsenic (As): ≤1.5 PPM Cadmium (Cd): ≤0.5 PPM Mercury (Hg): ≤1.0 PPM Lead (Pb): ≤0.5 PPM	<u>ND</u>	PASS

* Level of Quantitation, † Parts Per Million

Quality Certified by: Kei Horikawa 05/11/2021
 Kei Horikawa Date
 Quality Control Manager

certificate ID

1DY47

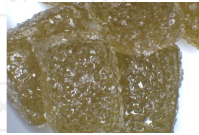
Green Apple CBD Gummies 10mg

7USC1639 Certificate of Analysis

Lot# J10GA01

rec'd 4/28/2021 5:05:58 PM

order 10607



total cannabinoids
11.0mg

per gummy

THC‡ ND
CBD‡ 10.3mg

This Product Has Been Tested and Complies with 7USC1639o(1)

Stillwater Laboratories



Potency	per gummy	MSP-7.5.1.4	LOD	LOQ	error (95%CI k=2)
total cannabinoids	11.0mg		0.02	0.06	±0.26mg
total THC‡	ND		0.02	0.06	±0.06mg
total THC (THC+THCa)	ND		0.02	0.06	±0.06mg
total CBD‡	10.3mg		0.02	0.06	±0.25mg
total CBD (CBD+CBDA)	10.3mg		0.02	0.06	±0.25mg
tetrahydrocannabinolic acid (THCa)	ND		0.02	0.07	±0.07mg
Δ9-tetrahydrocannabinol (Δ9 THC)	ND		0.02	0.06	±0.06mg
Δ8-tetrahydrocannabinol (Δ8 THC)	ND		0.03	0.08	±0.08mg
tetrahydrocannabivarin (THCv)	ND		0.02	0.07	±0.07mg
cannabidiolic acid (CBDA)	ND		0.02	0.06	±0.06mg
cannabidiol (CBD)	10.3mg		0.02	0.06	±0.25mg
cannabidivarin (CBDv)	ND		0.02	0.06	±0.06mg
cannabigerolic acid (CBGa)	ND		0.02	0.06	±0.06mg
cannabigerol (CBG)	0.7mg		0.01	0.02	±0.03mg
cannabinol (CBN)	ND		0.01	0.04	±0.04mg
cannabinchromene (CBC)	ND		0.02	0.06	±0.06mg

Microbial	MSP-7.5.1.10	limit	LOD	LOQ	error	result
E.coli	ND	OCFU	0.0	0.1	±0.1CFU	PASS
Salmonella sp.	ND	OCFU	0.0	0.1	±0.1CFU	PASS
molds	ND	10000CFU	1.4	4.1	±4.1CFU	PASS
Ochratoxin A	ND	20 ppb	0.3	0.9	±0.9 ppb	PASS
Aflatoxin B1B2G1G2	ND	20 ppb	0.3	0.9	±0.9 ppb	PASS

Metals	MSP-7.5.1.11	limit	LOD	LOQ	error	result
Arsenic	ND	1500 ppb	4.7	14.1	±14.1 ppb	PASS
Cadmium	ND	500 ppb	5.1	15.2	±15.2 ppb	PASS
Lead	ND	500 ppb	7.9	23.7	±23.7 ppb	PASS
Mercury	ND	300 ppb	4.0	11.9	±11.9 ppb	PASS

Pesticides	MSP-7.5.1.8	limit	LOD	LOQ	error	result
Pyrethrin	ND	1.00 ppm	0.002	0.005	±0.005 ppm	PASS
Pyridaben	ND	3.00 ppm	0.001	0.002	±0.002 ppm	PASS
Spinetoram	ND	3.00 ppm	0.002	0.007	±0.007 ppm	PASS
Spinosad	ND	3.00 ppm	0.005	0.014	±0.014 ppm	PASS
Spiromesifen	ND	12.00 ppm	0.002	0.006	±0.006 ppm	PASS
Spirotetramat	ND	13.00 ppm	0.002	0.005	±0.005 ppm	PASS
Spiroxamine	ND	0.00 ppm	0.001	0.002	±0.002 ppm	PASS
Tebuconazole	ND	2.00 ppm	0.004	0.011	±0.011 ppm	PASS
Thiacloprid	ND	0.10 ppm	0.001	0.002	±0.002 ppm	PASS
Thiamethoxam	ND	4.50 ppm	0.002	0.006	±0.006 ppm	PASS
Trifloxystrobin	ND	30.00 ppm	0.002	0.005	±0.005 ppm	PASS

Pesticides	MSP-7.5.1.8	limit	LOD	LOQ	error	result
Abamectin	ND	0.30 ppm	0.005	0.015	±0.015 ppm	PASS
Acephate	ND	5.00 ppm	0.005	0.016	±0.016 ppm	PASS
Acequinocyl	ND	4.00 ppm	0.004	0.013	±0.013 ppm	PASS
Acetamiprid	ND	5.00 ppm	0.004	0.011	±0.011 ppm	PASS
Aldicarb	ND	0.00 ppm	0.001	0.004	±0.004 ppm	PASS
Azoxystrobin	ND	40.00 ppm	0.001	0.004	±0.004 ppm	PASS
Bifenazate	ND	5.00 ppm	0.001	0.003	±0.003 ppm	PASS
Bifenthrin	ND	0.50 ppm	0.001	0.002	±0.002 ppm	PASS
Boscalid	ND	10.00 ppm	0.014	0.043	±0.043 ppm	PASS
Carbaryl	ND	0.50 ppm	0.006	0.017	±0.017 ppm	PASS
Carbofuran	ND	0.00 ppm	0.001	0.003	±0.003 ppm	PASS
Chlorantraniliprole	ND	40.00 ppm	0.014	0.041	±0.041 ppm	PASS
Chlorfenapyr	ND	0.00 ppm	0.004	0.011	±0.011 ppm	PASS
Chlorpyrifos	ND	0.00 ppm	0.028	0.085	±0.085 ppm	PASS
Clofentezine	ND	0.50 ppm	0.005	0.016	±0.016 ppm	PASS
Coumaphos	ND	0.00 ppm	0.004	0.011	±0.011 ppm	PASS
Cyfluthrin	ND	1.00 ppm	0.005	0.015	±0.015 ppm	PASS
Cypermethrin	ND	1.00 ppm	0.004	0.011	±0.011 ppm	PASS
Daminozide	ND	0.00 ppm	0.019	0.058	±0.058 ppm	PASS
Dichlorvos	ND	0.00 ppm	0.010	0.030	±0.030 ppm	PASS
Diazinon	ND	0.20 ppm	0.001	0.002	±0.002 ppm	PASS
Dimethoate	ND	0.00 ppm	0.001	0.004	±0.004 ppm	PASS
Etoxazole	ND	1.50 ppm	0.003	0.008	±0.008 ppm	PASS
Fenoxycarb	ND	0.00 ppm	0.002	0.007	±0.007 ppm	PASS
Fenpyroximate	ND	2.00 ppm	0.001	0.002	±0.002 ppm	PASS
Fipronil	ND	0.00 ppm	0.005	0.016	±0.016 ppm	PASS
Fonicamid	ND	2.00 ppm	0.069	0.207	±0.207 ppm	PASS
Fludioxonil	ND	30.00 ppm	0.005	0.014	±0.014 ppm	PASS
Hexythiazox	ND	2.00 ppm	0.001	0.002	±0.002 ppm	PASS
Imazail	ND	0.00 ppm	0.005	0.014	±0.014 ppm	PASS
Imidacloprid	ND	3.00 ppm	0.001	0.002	±0.002 ppm	PASS
Malathion	ND	5.00 ppm	0.004	0.011	±0.011 ppm	PASS
Metaxalyl	ND	15.00 ppm	0.005	0.016	±0.016 ppm	PASS
Methiocarb	ND	0.00 ppm	0.003	0.008	±0.008 ppm	PASS
Methomyl	ND	0.10 ppm	<0.001	0.001	±0.001 ppm	PASS
Methyl parathion	ND	0.00 ppm	0.001	0.002	±0.002 ppm	PASS
Mevinphos	ND	0.00 ppm	0.004	0.011	±0.011 ppm	PASS
Myclobutanil	ND	9.00 ppm	0.001	0.002	±0.002 ppm	PASS
Naled	ND	0.50 ppm	0.004	0.011	±0.011 ppm	PASS
Oxamyl	ND	0.20 ppm	0.002	0.005	±0.005 ppm	PASS
Pacllobutrazol	ND	0.00 ppm	0.002	0.006	±0.006 ppm	PASS
Permethrin	ND	20.00 ppm	0.007	0.021	±0.021 ppm	PASS
Phosmet	ND	0.20 ppm	0.002	0.006	±0.006 ppm	PASS
Piperonylbutoxide	ND	8.00 ppm	0.007	0.021	±0.021 ppm	PASS
Prallethrin	ND	0.40 ppm	0.003	0.008	±0.008 ppm	PASS
Propiconazole	ND	20.00 ppm	0.003	0.008	±0.008 ppm	PASS
Propoxur	ND	0.00 ppm	0.004	0.012	±0.012 ppm	PASS

SECURITY FEATURE: WATERMARK MUST MATCH CERTIFICATE ID AND ISSUE DATE

Certified by:



https://customer.a2la.org/index.cfm?event=directory_detail&labPID=423635B2-5128-4C6F-871A-419DCF43B0D7

Stillwater Laboratories Inc.
MT License L0001, L00007
6073 US93N Suite 5, Olney MT 59927
406-881-2019

INSTRUMENTS: Potency by HPLC (LC2030C-UV), solvents and terpenes by GCMS (QP2020/HS20), pesticides and mycotoxins by LCMSMS (LC8060), microbial by qPCR (AriaMx) and plating (Hardy Diagnostics), metals by ICPMS (ICPMS-2030)

All testing was completed onsite at 6073 US93N, Olney MT. Potency (cannabinoid concentration) is calculated as: [cannabinoid] = [cannabinoid]_{HPLC} x volume_{dilution}/M_{dry}. ... Decarboxylated cannabinoid concentration is calculated XXX_{total} = 0.877 x XXX_A + XXX. Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; LOD is the limit of detection (3.3s), LOQ is the limit of quantification (3xLOD), and experimental error is calculated from weighing, dilution, and interpolation error using the formula s_e² = Σ (d_i/d_i)² s_e² where i is the contributor to error. The 95% confidence range is calculated from: (concentration) ± t_{CL90} x s_e. Sampling error is not considered in error calculations. ND = not detected (< LOD), NT = not tested, NL = no limit, NA = not applicable. ‡ = decarbed

Kyle Larson, MSC
Deputy Director

Jacob Harris
QA Manager

Printed 5/1/2021 12:48 PM



C0325-003

7USC1639 Certificate of Analysis

sample ID 26419

This Product Has Been Tested and Complies with 7USC1639o(1)

Stillwater Laboratories

certificate ID 1CX18

total cannabinoids 87.39% per gram

THC total ND CBD total 82.44% terpenes

MSP-7.5.1.3

0.000

extract

order 10243 analysis date 3/26/2021 3:55:32 PM test tag 10243.3.4 sample wgt

- caryophyllene humulene terpinolene ocimene beta pinene alpha pinene limonene myrcene linalool



Inspection MSP-7.5.1.2

DESCRIPTION: Concentrate sample received in a client-labeled bottle, by commercial courier. Labeled 26419 and sample tag 10243.3.4.

Potency per gram

MSP-7.5.1.4 LOD LOQ error (95%CI k=2)

Table with 4 columns: Compound, Value, LOD, LOQ, Error. Rows include tetrahydrocannabinolic acid (THCa), Δ9-tetrahydrocannabinol (Δ9 THC), Δ8-tetrahydrocannabinol (Δ8 THC), tetrahydrocannabivarin (THCv), cannabidiolic acid (CBDa), cannabidiol (CBD), cannabidivarin (CBDv), cannabigerolic acid (CBGa), cannabigerol (CBG), cannabinalol (CBN), and cannabichromene (CBC).

Terpenes

MSP-7.5.1.6

MSP-7.5.1.6

‡ = decarbed NT = not tested NL = no limit, ND = not detected, LOD = detection limit, LOQ = quantitation limit

Microbial

MSP-7.5.1.10 limit

Metals

MSP-7.5.1.11 limit

Pesticides

MSP-7.5.1.8 limit

Pesticides

MSP-7.5.1.8 limit

Table with 4 columns: Microbial, Metals, Pesticides, Pesticides. Rows include E.coli, Salmonella sp., molds, Ochratoxin A, Aflatoxin, Arsenic, Cadmium, Lead, Mercury, Abamectin, Acephate, Acequinocyl, Acetamiprid, Aldicarb, Azoxystrobin, Bifenazate, Bifenthrin, Boscalid, Carbaryl, Carbofuran, Chloantraniliprole, Chlorfenapyr, Chlorpyrifos, Clofentezine, Coumaphos, Cyfluthrin, Cypermethrin, Daminozide, Dichlorvos, Diazinon, Dimethoate, Etoxazole, Fenoxycarb, Fenpyroximate, Fipronil, Flonicamid, Fludioxonil, Hexythiazox, Imazalil, Imidacloprid, Malathion, Metalaxyl, Methiocarb, Methomyl, Methyl parathion, Mevinphos, Myclobutanil, Naled, Oxamyl, Paclobutrazol, Permethrin.

Solvents

MSP-7.5.1.7 limit

Pesticides

MSP-7.5.1.8 limit

Table with 4 columns: Solvents, Pesticides, Pesticides, Pesticides. Rows include Acetone, Acetonitrile, Benzene, Butane, Chloroform, Cyclohexane, Ethanol, Heptane, Hexane, Isopropyl alcohol, Methanol, Pentane, Propane, Toluene, Xylenes, Permethrin, Phosmet, Piperonylbutoxide, Prallethrin, Propiconazole, Propoxur, Pyrethrin, Pyridaben, Spinetoram, Spinosad, Spiromesifen, Spirotetramat, Spiroxamine, Tebuconazole, Thiachloprid, Thiamethoxam, Trifloxystrobin, Abamectin, Acephate, Acequinocyl, Acetamiprid, Aldicarb, Azoxystrobin, Bifenazate, Bifenthrin, Boscalid, Carbaryl, Carbofuran, Chloantraniliprole, Chlorfenapyr, Chlorpyrifos, Clofentezine, Coumaphos, Cyfluthrin, Cypermethrin, Daminozide, Dichlorvos, Diazinon, Dimethoate, Etoxazole, Fenoxycarb, Fenpyroximate, Fipronil, Flonicamid, Fludioxonil, Hexythiazox, Imazalil, Imidacloprid, Malathion, Metalaxyl, Methiocarb, Methomyl, Methyl parathion, Mevinphos, Myclobutanil, Naled, Oxamyl, Paclobutrazol, Permethrin.

INSTRUMENTS potency: HPLC (LC2030C-UV) terpenes: GCMS (QP2020/HS20) solvents: GCMS (QP2020/HS20) pesticides: LCMSMS (LC8060) mycotoxins: LCMSMS (LC8060) microbial: qPCR (AriaMx) and plating metals: ICPMS (ICPMS-2030)

SECURITY FEATURE: WATERMARK MUST MATCH CERTIFICATE ID AND ISSUE DATE

Certified by:

[Signature]

Kyle Larson, MSc (Biology) Deputy Director

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Printed 3/31/2021 11:07 AM

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